

recognized that function determines form. But however clearly we recognize now this fact, and however improved become our views of morphology in consequence, it is improbable that categories of homologous organs will cease to demand recognition in our thought and in our terminology.

In a somewhat similar way the author constructs men of straw out of the categories caulome, trichome, etc., and charges them so impetuously that his momentum carries him beyond safe middle ground to untenable positions. So completely has he taken the physiological point of view, that he prefers to base terminology upon analogy, even when he acknowledges that it obscures homologies. This may do for popular speech, but it ought not to continue and cannot long persist in scientific language.

Though every reader may not be able to go the full length with Professor Goebel, it is manifest that he has produced a most useful and stimulating treatise on the organography of plants, which no one who cares to keep abreast of modern views can neglect.—C. R. B.

MINOR NOTICES.

DR. CHARLES F. MILLSPAUGH⁹ has published a third contribution to our knowledge of the flora of Yucatan. The Schott herbarium recently obtained, the Witmer Stone collection of 1890 under the auspices of the Academy of Natural Sciences of Philadelphia, the E. P. Johnson collection of 1848 (examined at the herbarium of Columbia University), and the continued collections of Dr. Geo. F. Gaumer, have furnished much material not reported heretofore. Sixteen new species are described.—J. M. C.

TWO USEFUL bibliographical works have recently reached us. One is from the U. S. Department of Agriculture; a library bulletin containing a "Reference list of publications relating to edible and poisonous mushrooms." It has been compiled by Miss Josephine A. Clark, the assistant librarian, to whom botanists are already under obligations for her card index of new species and illustrations. This bulletin seems to have been called out by the of poisoning some prominent persons at Washington lately through eating amanitas. The list contains 306 titles.

The other bibliography is a list of periodicals relating to botany in the New York public library and the library of Columbia University, and also a list of those relating to horticulture and gardening in the same libraries. This 11-page pamphlet reaches us "with the compliments of Lucien M. Underwood," but bears neither imprint nor indication of who its compiler may be. This, however, will not interfere with its usefulness.—C. R. B.

⁹Contribution III to the coastal and plain flora of Yucatan. Field Columbian Museum Publication 25. Botanical Series 1: 345-410. 1898.

THE BOOKLET, *Flowers that never fade*,¹⁰ contains an account of the Ware collection of Blaschka glass models in the Harvard University museum. This description was originally prepared by Mr. F. B. Wiley, the author of the *Harvard Guide Book*, for the *Boston Transcript*, in response to requests for information concerning this unique collection. Revised and considerably extended, it is now reprinted, with a poetic (?) introduction. Fulsome praise mingles with the description of the inception and execution of the work, and of

"The home at Hosterwitz,
Where a lonely artist sits."

The author warmly congratulates Harvard University on being "the fortunate possessor of the only collection of these exquisite creations now in existence," and about them he sings:

"The varying seasons bring
No change to this blossoming:
The spring never ends for these
Enduring anemones;
The summer's reign never closes
For these perennial roses:
The autumn's horn never holds
Even one of these marigolds;
And the winter never comes
To these bright chrysanthemums."

Mum's the word.—C. R. B.

A USEFUL SET of directions for experiments in plant physiology has recently been published by Dr. J. C. Arthur, in pamphlet form.¹¹ The series includes thirty-five experiments, and are those which he has found serviceable in illustrating a course of lectures extending over five months. The directions are intended only as a guide to manipulation; not to indicate the purpose of the experiment or the deductions from it. The experiments chosen are illustrative of the fundamental processes of plant life, and the pamphlet will be particularly valuable to teachers who are conducting elementary college courses.—C. R. B.

THE INTEREST in native edible mushrooms, and *per contra* native poisonous ones, has been increasing for sometime. Every addition to the literature of the subject is likely to find an expectant public. The recent publication by

¹⁰ WILEY, FRANKLIN BALDWIN.—*Flowers that never fade: an account of the Ware collection of Blaschka glass models in the Harvard University museum.* 16mo. pp. 41. Boston: Bradlee Whidden. 1897. 35 cents.

¹¹ ARTHUR, J. C.—*Laboratory exercises in vegetable physiology.* 8vo. pp. 32. pt. 5. Lafayette, Ind.: Kimmel & Herbert. 1897. 35 cents.

Dr. Thomas Taylor¹² of a work on mushrooms, with colored plates of reasonably good quality, will doubtless meet with an appreciative response. Dr. Taylor was for many years the microscopist of the United States Department of Agriculture, and the readers of this journal do not need to be told the character of his work. In this official capacity he issued a number of reports on mushrooms, which have furnished some of the material for the present series.

Although the subject is not treated in a sufficiently systematic way properly to entitle the work to the name of "handbook," and in spite of some irrelevant matter, the mycophagist will yet find much in these pages to help him.—J. C. A.

NOTES FOR STUDENTS.

A NEW *Rumex* from Colorado has been described by Geo. E. Osterhout.¹³—Further notes on the southern species of *Asarum* have been published by W. W. Ashe.¹⁴—Professor E. L. Greene¹⁵ has published another fascicle of "New or noteworthy species," in which the following genera are represented by new species: *Delphinium*, *Myosurus*, *Viola*, *Mertensia*, *Plagiobothrys*, *Lithospermum*, and *Eriogonum*. In "Studies in Compositæ" some helenioid genera are taken up. The name *Actinella*, as employed by Nuttall and by Gray, is a homonym, and Rafinesque's *Ptilepida* (used in the *Check List*) is precluded as a synonym of Persoon's *Actinella* and not of Nuttall's. Accordingly Professor Greene publishes the name *Tetraneuris*, under which he places eighteen species. Hooker's *Picradenia* is kept separate from it, and a new genus, *Rydbergia*, is founded on *Actinella grandiflora* T. & G.—Those wishing to keep pace with the synonymy of the species of *Asarum* should not fail to note the recent brief paper by James Britten and Edward G. Baker, who introduce the new name *A. Shuttleworthii*.¹⁶—J. M. C.

HERMANN VON SCHRENK'S¹⁷ study of the influence of the tornado of 1896 upon the trees of St. Louis is an important contribution to the general subject of the effect of extraordinary conditions upon plant life. Mr. von Schrenk's

¹² TAYLOR THOMAS.—Student's handbook of mushrooms of America, edible and poisonous. Washington, A. R. Taylor (238 Mass. Ave., N. E.). 8vo. In five numbers of twenty-four pages, and five or six partly colored plates each. 1897-8. 50 cents per number.

¹³ *Erythea* 6: 13. 1898.

¹⁴ *Jour. of the Elisha Mitchell Soc.* 14: 31-36. 1897.

¹⁵ *Pittonia* 3: 257-272. 1898.

¹⁶ *Jour. Bot.* 36: 96-99. 1898.

¹⁷ The trees of St. Louis as influenced by the tornado of 1896. *Trans. St. Louis Acad. Sci.* 7: 25-41. 1897.